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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/693,317

10/20/2000

Kia Silverbrook

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SILVERBROOK RESEARCH PTY LTD
393 DARLING STREET
BALMAIN, 2041
AUSTRALIA

EXAMINER

LETT, THOMAS J

ART UNIT

PAPER NUMBER

2625

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/693,317	Applicant(s) SILVERBROOK ET AL.	
	Examiner THOMAS J. LETT	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 21 February 2008 has been entered.

Response to Arguments

2. Applicant's arguments filed 21 February 2008 have been fully considered but they are not persuasive.

3. Applicants state that amended claim 6 requires the scanner to have a scan resolution at least double that of the print resolution. Examiner finds vague support for this at page 8, lines 32-33. In Applicants' case, the resolution of the used scanner is preferably equal to or higher than that of the printer of producing the printed image.

Examiner notes that this is a fundamental when sampling data to accurately reconstruct that which is read. In order to accurately read the dotted information of the printed image, it is of course necessary that the resolution on the scanner side is twice or more the resolution on the printer side in accordance with the Nyquist sampling theorem in order to successfully reconstruct the information. Sampling at a rate that is at least twice that of the signal of interest results in no information (data) being lost upon reconstruction.

4. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., if the indicia are damaged or fail to scan properly, there is no suggestion of generating another image data

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file from different indicia on the photograph.) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soscia (US 6,636,332 B1) in view of the Nyquist-Shannon sampling theorem.
6. Regarding claim 6, Soscia discloses an apparatus (reproduction system 10 of figure 1) for reproducing a visible image (image 20) depicted in a photograph, the photograph also carrying digitally encoded data printed in invisible ink (invisible indicia 40, col. 3, lines 34-38, col. 4, lines 5-19), the digitally encoded data having pixel values for all pixels in the visible image (the encoded data array 40 defines the digital image file and would therefore include the pixel values necessary for a successful visual reproduction of an image, col. 3, line 60 – col. 4, line 4), comprising:

a scanner means for scanning the digital data (sensor 150 for scanning, col. 6, lines 3-5 and col. 5, lines 58-63) to produce a bit image with a plurality of copies of data relating to the visible image depicted in the photograph, the scanner means having a scan resolution at least twice that of the print resolution of the digitally encoded data such that the scanner scans all the digital data in a single scan;

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means for advancing the photograph through the scanner means (feedthrough, col. 6, line 4);

means for illuminating the photograph with invisible radiation (light source, col. 6, lines 22-30);

means for processing data output (processor 240, col. 6, lines 49-54) from the scanner means, the means for processing data including means for decoding the plurality of copies (copies of copies are decoded to form reproductions, col. 7, lines 4-8 and 48-54) of data relating to the visible image from the digitally encoded data scanned by the scanner means; and,

inkjet printer (printer 270, col. 6, lines 54-56) means for receiving data from the means for processing data (processor 240) to print the visible image depicted in the photograph, the data used to print the visible image being generated using plurality of copies (copies of copies are decoded to form reproductions, col. 7, lines 4-8 and 48-54) of data relating to the visible image which the means for decoding correctly decoded from the digitally encoded data (the system of Soscia can obviously make more than one scan/copy of an original and can subsequently attempt to repeat the decoding process until it is successful with a latter copy).

Soscia does not expressly teach the scanner means having a scan resolution greater than the print resolution of the digitally encoded data.

However, the Nyquist sampling theorem teaches that in order to successfully reconstruct the information, the sampling must be done at a rate that is at least twice that of the signal of interest will result in no information (data) being lost upon reconstruction. It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Soscia by the teaching of Nyquist because the data would be accurately reconstructed.

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Regarding claim 3, Soscia discloses an apparatus as claimed in claim 6 wherein said invisible ink is an infra-red absorbing ink, and wherein said invisible radiation is infra-red light (col. 4, lines 9-16).

Regarding claim 4, Soscia discloses an apparatus as claimed in claim 6 wherein said ink jet printer means includes means for printing out on a print media (recording medium 280) attached to said ink jet printer means both the visible image depicted in the photograph and the digitally encoded data (col. 6, lines 49-54).

7. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soscia (US 6,636,332 B1) in view of the Nyquist-Shannon sampling theorem as applied to claim 6 above, and further in view of Zhang (US 5,771,245).

Soscia in view of the Nyquist-Shannon sampling theorem do not disclose expressly that the digitally encoded data is encoded and decoded using the Reed-Solomon process.

Zhang discloses using the Reed-Solomon process to encode/decode data (col. 4 lines 18-20).

Soscia in view of the Nyquist-Shannon and Zhang are combinable because they are from the same field of endeavor, namely two-dimensional data encoding and decoding. Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art, to use the Reed-Solomon process, as taught by Zhang, as the encoding/decoding process in Soscia in view of the Nyquist-Shannon system. The motivation for doing so would have been that the Reed-Solomon process is a well-known process in the art to protect encoded data (Zhang: col. 4 lines 18-20).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS J. LETT whose telephone number is (571)272-7464. The examiner can normally be reached on 8-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas J. Lett/
Examiner, Art Unit 2625

/David K Moore/
Supervisory Patent Examiner, Art Unit 2625